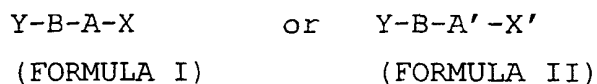


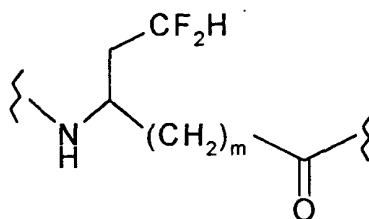
CLAIMS:

1. A fluorine containing oligopeptide of formula:



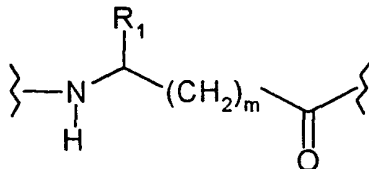
wherein:

A is an amino acid residue of formula:



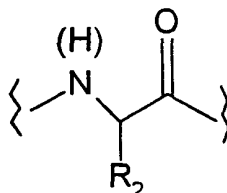
where m is 0 or 1.

A' is an amino acid residue of formula



where m is 0, or 1 and R<sub>1</sub> is a fluorine-substituted hydrocarbyl side chain containing from 1 to 15 carbon atoms;

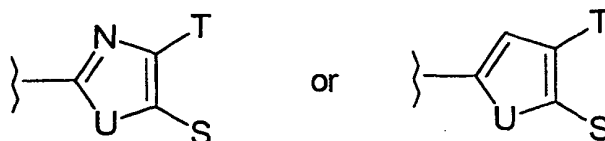
B is a naturally or non-naturally occurring amino acid residue of formula:



wherein  $R_2$  contains from 1 to 20 carbon atoms is a non-polar, or polar but uncharged sidechain or is a side chain containing an acidic functionality;

X is selected from the following:

- 5     $-\text{CO}_2\text{R}_8$ ;  $-\text{H}$ ;  $-\text{OR}_8$ ;  $-\text{CF}_3$ ;  $-\text{CONR}_9\text{R}_{10}$ ;  $-\text{CF}_2\text{CONR}_9\text{R}_{10}$ ;  $-\text{NH.SO}_2\text{R}_{25}$  or a heterocyclic group of formula:



10    wherein U is sulphur, oxygen or  $\text{NR}_{11}$ ;  $R_8$ ,  $R_9$ ,  $R_{10}$ ,  $R_{11}$  and  $R_{25}$  are, independently, hydrogen or a lower alkyl, lower alkenyl, aryl, or aralkyl group, and S and T are each independently either H or  $R_{12}$ , where  $R_{12}$  is a lower alkyl, lower alkenyl, aryl or aralkyl group, or can together form a ring;

15     $X'$  is OH or  $-\text{NHSO}_2\text{R}_{25}$ , where  $R_{25}$  is as defined above; and Y is selected from (i) and (ii) below:

(i)     $\text{Z-F-E-D-C-}$

20    wherein C is a natural or non-natural amino acid residue having a non-polar, polar but uncharged, or acidic side chain containing from 1 to 20 carbon atoms;

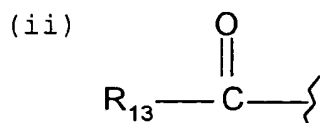
D may be absent, but where present is a natural or non-natural amino acid having a hydrophobic side chain containing 1 to 20 carbon atoms;

25    E may be absent, but where present is a natural or non-natural amino acid having an acidic side chain containing from 1 to 20 carbon atoms, or is a dicarboxylic acid containing up to 10 carbon atoms;

30    F may be absent, but where present is a natural or non-natural amino acid having an acidic side chain

containing from 1 to 20 carbon atoms, or is a dicarboxylic acid containing up to 10 carbon atoms; and

5 Z may be absent, -H, or a group of formula  $R_7CO-$ , where  $R_7$  is a group containing from 1 to 20 carbon atoms which is chosen such that the group  $R_7CO-$  together with the nitrogen atom to which it is attached forms an amide, urethane or urea linkage;



10 where  $R_{13}$  is an aliphatic or aromatic group containing from 1 to 25, carbon atoms and 0-5 oxygen atoms, 0-3 nitrogen atoms, 0 to 2 sulphur atoms and up to 9 other heteroatoms which may be the same or different;

15

or a pharmaceutically acceptable salt or ester thereof.

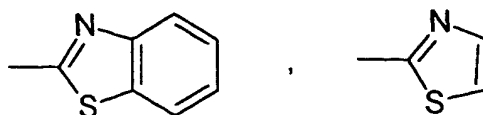
2. An oligopeptide of Formula II or a salt or ester thereof according to claim 1 wherein  $R_1$  is selected from:

20



3. An oligopeptide of Formula I or a salt or ester thereof according to claim 1 wherein X is selected from:  $-\text{CO}_2\text{H}$ ,  $-\text{CONHCH}_2\text{Ph}$ ,  $-\text{H}$ ,  $-\text{OH}$ ,  $-\text{NHSO}_2\text{R}_{25}$  (where  $\text{R}_{25}$  is as defined in claim 1),

25

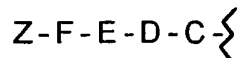


4. An oligopeptide of Formula I or a salt or ester thereof according to claim 3 wherein X is selected from: -H; -OH; -COOH, and -NHSO<sub>2</sub>R<sub>25</sub>.

5. An oligopeptide of Formula I or <sup>claim 1</sup> ~~any one of the preceding~~ ester thereof according to ~~any one of the preceding~~ claims wherein B is selected from: glutamic acid and aspartic acid, 2-aminobutyric acid, 4,4-difluoro-2-aminobutyric acid, alanine, isoleucine, valine, leucine, cysteine, phenylalanine, naphthylalanine,  $\beta$ -cyclohexylalanine, and proline.

6. An oligopeptide, salt or ester according to claim 5 wherein B is selected from  $\beta$ -cyclohexylalanine, leucine, glutamic acid and 4,4-difluoro-2-aminobutyric acid.

7. An oligopeptide, salt or ester according to <sup>claim 1</sup> ~~any one of the preceding claims,~~ wherein Y is a group of formula:



and C is selected from: alanine, isoleucine, leucine, phenylalanine, valine, norleucine, norvaline, glutamic acid, glutamine, aspartic acid,  $\alpha$ -t-butyl glycine,  $\alpha$ -cinnamylglycine, homoleucine, 3,5 dichlorophenylalanine 2-thienylalanine, 3-bromophenylalanine and  $\alpha$ -cyclopentyl glycine.

8. An oligopeptide, salt or ester according to claim 7 wherein C is selected from: isoleucine, glutamic acid,  $\alpha$ -cyclopentylglycine, t-butyl glycine and valine.

9. An oligopeptide, salt or ester according to claim 7 ~~or claim 8~~ wherein D is selected from: methionine, isoleucine, leucine, norleucine, valine, methyl valine,

phenylglycine or diphenylalanine.

10. An oligopeptide, salt or ester according to claim 9 wherein D is leucine or diphenylalanine.

5

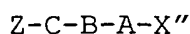
11. An oligopeptide, salt or ester according to claim 9 ~~or claim 10~~ wherein E is selected from glutamic acid, aspartic acid, succinic acid and glutaric acid.

10

12. An oligopeptide, salt or ester according to claim 11 wherein F is selected from glutamic acid, aspartic acid, succinic acid and glutaric acid.

13. A tripeptide of formula:

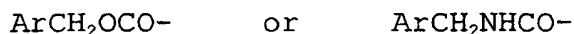
15



in which A, B, C and Z are as defined in claim 1 and X'' is a carboxylic acid group ( $-CO_2H$ ), amide group ( $-CONR_9R_{10}$ ) or hydrogen; or a pharmaceutically acceptable salt or ester thereof.

20

14. A tripeptide, salt or ester according to claim 13 in which Z is a lower alkyloxy group or a group of formula:



wherein Ar is an optionally substituted aryl group.

25

15. A tripeptide, salt or ester according to claim 13 ~~or 14~~ wherein the amino acid B is selected from: cyclohexylalanine, leucine,  $\alpha$ -aminobutyric acid, 4,4-difluoro-2-aminobutyric acid and phenyl alanine.

30

16. A tripeptide, salt or ester according to <sup>claim 13</sup> ~~any one of claims 13 to 15~~ wherein the amino acid C is selected from: alanine, isoleucine, leucine, phenylalanine, valine, norleucine, norvaline, glutamic acid, glutamine, aspartic acid,  $\alpha$ -t-butyl glycine, styrylalanine,

35

homoleucine, 3,5 dichlorophenylalanine, 2-thienylalanine, 3-bromophenylalanine and  $\alpha$ -cyclopentyl glycine.

17. A tripeptide according to <sup>claim</sup> ~~any one of claims 13 to 16~~ wherein the combination of amino acids C-B is selected from:

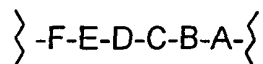
isoleucine - cyclohexylalanine  
 isoleucine - leucine  
 isoleucine -  $\alpha$ -aminobutyric acid  
 isoleucine - phenylalanine  
 leucine - leucine  
 phenylalanine - leucine  
 valine - leucine  
 norleucine - leucine  
 norvaline - leucine  
 glutamic acid - leucine  
 glutamine - leucine  
 n-butylaspartic acid - leucine  
 aspartic acid - leucine  
 t-butyl glycine - leucine  
 glutamic acid - 4,4 difluoro-2-aminobutyric acid  
 $\alpha$ -cinnamyl glycine - leucine  
 homoleucine - leucine  
 2-thienylalanine - leucine  
 3-bromophenylalanine - leucine  
 $\alpha$ -cyclopentylglycine - leucine.

18. A hexapeptide, salt or ester according to claim 1 having the formula:

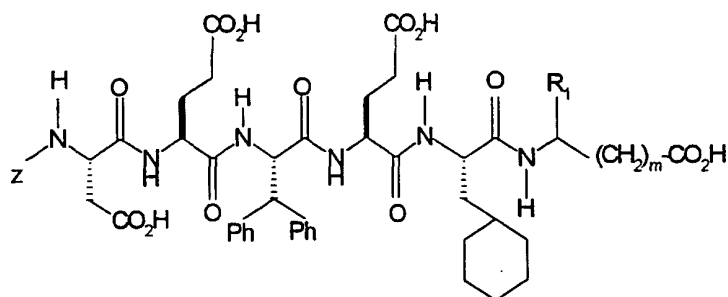
Z-F-E-D-C-B-A-X or Z-F-E-D-C-B-A'-X'

where A-F, X and Z, A' and X' are as defined in claim 1.

19. A hexapeptide, salt or ester according to claim 18 wherein the group

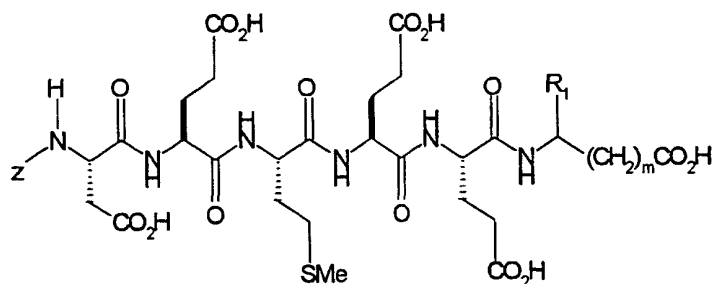


is selected from:



5

and



20. A fluorine containing dipeptide according to Formula I of claim 1 wherein:

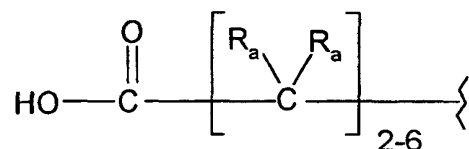
X is -COOH;

B is leucine; and

10 Y is a group of formula  $R_{13}CO-$  where  $R_{13}$  is as defined in claim 1;  
or a pharmaceutically acceptable salt or ester thereof.

21. A dipeptide, salt, or ester according to claim 20

wherein  $R_{13}$  is a group of general formula

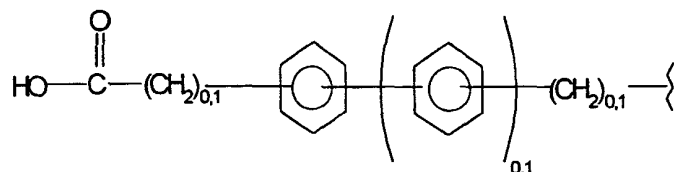


wherein each  $R_a$  is independently selected from hydrogen,  
lower alkyl, lower alkenyl, lower alkoxy, optionally  
5 substituted aryl or aralkyl groups or two  $R_a$  taken  
together result in the formation of a three to seven  
membered aliphatic or aromatic ring which optionally  
contains at least one heteroatom.

10 22. A dipeptide, salt or ester according to claim 21  
wherein at least one group  $-\text{C}(\text{R}_a)_2-$  is replaced by  $-\text{O}-$ .

23. A dipeptide, salt or ester according to claim 21  
wherein  $R_{13}$  is a group of formula:

15



24. A dipeptide salt or ester according to claim 20  
wherein  $R_{13}$  is a group of formula:

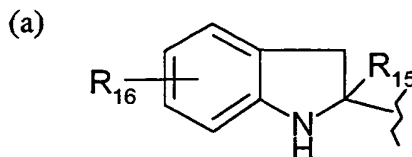
20



where  $R_{14}$  is a cycloalkyl or optionally substituted aryl  
group.

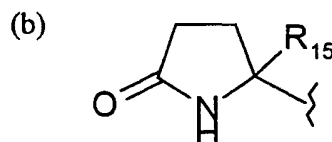


25. A dipeptide salt or ester according to claim 20  
wherein  $R_{13}$  is a group selected from:



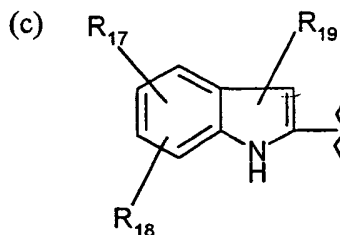
5 where  $R_{15}$  is hydrogen, an optionally branched, optionally  
interrupted and optionally substituted lower alkyl or  
lower alkenyl group or an optionally substituted aralkyl  
group,  $R_{16}$  is hydrogen or an optionally substituted and  
optionally interrupted lower alkoxy or aryloxy- group;

10



where  $R_{15}$  is as defined above; and

15



where each of  $R_{17}$ ,  $R_{18}$  and  $R_{19}$ , independently, is selected  
from hydrogen, optionally substituted lower alkyl, lower  
alkenyl and lower alkoxy, optionally substituted aryl,  
aralkyl, aryloxy or aralkoxy, a carboxylic acid group  
optionally as its lower alkyl ester, a halogen, cyano, or

20

CF<sub>3</sub> group.

26. A fluorine containing oligopeptide, salt or ester  
according to any one of the preceding claims for  
5 therapeutic use.

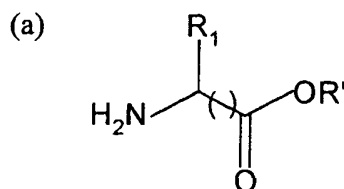
27. The use of a fluorine containing oligopeptide, salt  
or ester of any one of the preceding claims for the  
manufacture of a medicament for use in inhibiting the HCV  
10 NS3 protease, and/or for use in treating or preventing  
hepatitis C or a related condition.

28. A pharmaceutical composition comprising a fluorine  
containing oligopeptide, salt or ester according to <sup>claim</sup> ~~any~~  
15 ~~one of claims 1 to 25~~ and a pharmaceutically acceptable  
excipient, diluent or carrier.

29. A method of inhibiting HCV NS3 protease activity,  
and/or of treating or preventing hepatitis C or a related  
20 condition, the method comprising administering to a human  
or animal subject, a therapeutically or prophylactically  
effective amount of a composition according to claim 28,  
~~or of a fluorine containing oligopeptide salt or ester of~~  
~~any one of claims 1 to 25.~~

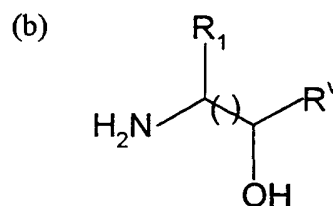
25 30. A method for the production of a compound of <sup>claim</sup> ~~any one~~  
~~of claims 1 to 25~~ comprising reaction of a compound of  
formula Y-NH-CHR<sub>2</sub>-CO<sub>2</sub>H where R<sub>2</sub> is as defined in claim 1,  
optionally in a protected form, with an amine coreactant  
30 selected from:

ADD  
A1



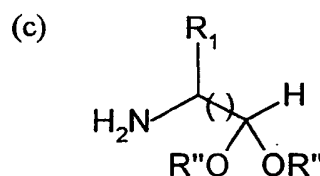
FORMULA K

where R' is a protecting group for a carboxylic acid group and R<sub>1</sub> is as defined in claim 1 and a (-CH<sub>2</sub>-) group is optionally present at the position marked by brackets;



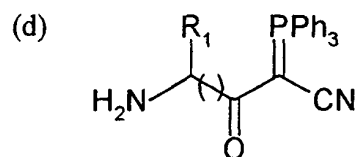
FORMULA L

where R<sub>1</sub> is as defined in claim 1, and R<sup>v</sup> is a group corresponding to, or convertible to X or X' of claim 1, and a (-CH<sub>2</sub>-) group is optionally present at the position marked by brackets;



FORMULA M

wherein R<sub>1</sub> is as defined in claim 1 and R'' is a lower alkyl group and a (-CH<sub>2</sub>-) group is optionally present at the position marked by brackets; and



FORMULA N

wherein R<sub>1</sub> is as defined in claim 1 and a (-CH<sub>2</sub>-) group is  
5 optionally present at the position marked by brackets.